AF/1763

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	Examiner: Rudy Zervigon
DAVID CHEUNG et al.	Art Unit: 1763
Application No.: 09/418,818	Confirmation No.: 9377
Filed: October 15, 1999	**APPELLANT'S REPLY BRIEF UNDER 37 CFR § 1.193(b)(1)**
For: METHOD AND APPARATUS FOR DEPOSITING ANTIREFLECTIVE COATING	

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Sir:

In response to the Examiner's Answer mailed on July 2, 2004 to the Appeal Brief filed on April 5, 2004, Applicants respectfully request the Board of Patent Appeals and Interferences to consider the following remarks. This reply brief is filed in triplicate, and is believed to be proper pursuant to 37 CFR § 1.193(b)(1).

ARGUMENTS:

1. On Pages 4-5 regarding the rejection of claims 1-6, 9, and 10, the Examiner states that Felts et al. (4,888,199) discloses a computer readable program and that Lee discloses "Applicant's claimed thickness as being an odd multiple, less than one, of the wavelength of light." **This statement is false.** The claim recites a thickness as being an odd multiple, greater than one, of a wavelength of light to be used in subsequent process operation on the layer.

On Page 5, the Examiner further states: "Applicant teaches on page 10 that said thickness is: $t = m\lambda/2n$." **This statement is also false.** The specification at page 10 discloses "$n_3 \cdot 2t = 1/2 (m\lambda)$." The expression for the thickness t based on this equation is $t = (m\lambda)/4n_3$.

On Page 5, the Examiner states: "Here, Forum [sic] Lee's factor of m/2(n-1) - is the inverse of all odd numbers, for n as integer." **This statement is again erroneous.** The factor m/2(n-1) cannot be the inverse of all odd numbers, since <u>2(n-1) must be an even number.</u>

It is amply clear that the Examiner's rejection is based on a misinterpretation of the claimed invention, a misconstruction of the cited art, and erroneous mathematics.

2.   On Page 6 regarding the rejection of claims 1-6, 9, and 10, the Examiner states: "In response, the Examiner sets forth that Forum [sic] Lee also teaches similar benefits for film thickness optimization . . . (column 3, lines 60-64; Figure 2)." <u>While Lee mentions optimization of the thickness of the phase-shift layer 12, it does not disclose or suggest a thickness that is an odd multiple, greater than one, of a wavelength of light to be used in a subsequent process on the layer, and does not mention any of the advantages cited by the Applicants.</u>

3.   On page 7 regarding the rejection of claims 1-6, 9, and 10, the Examiner states: "In response, the Examiner cites Forum [sic] Lee again who teaches benefits for film thickness optimization." <u>Again, although Lee mentions optimization of the thickness of the phase-shift layer 12, it does not disclose or suggest a thickness that is an odd multiple, greater than one, of a wavelength of light to be used in a subsequent process on the layer.</u>

4.   On pages 7-8 regarding the rejection of claim 51, the Examiner states: "In response, as the Examiner stated in the Final Rejection page 8: Felts et al

(USPat.5,364,665) teaches: . . . ." Nonetheless, "Felts et al. '665 does not cure the deficiencies of the other references," namely, Felts et al. '199, Batey et al., and Lee, as stated at page 14, lines 6-7 of Appellant's Brief.

5.   On pages 8-9 regarding the rejection of claim 52, the Examiner states: "In response, as the Examiner stated in the Final Rejection page 8: Collins teaches . . . ." Nonetheless, "Collins et al. [] does not cure the deficiencies of the other references," namely, Felts et al. '199, Batey et al., and Lee, as stated at page 14, line 14 of Appellant's Brief.

6.   On pages 9-11 regarding the rejection of claim 57, the Examiner states: "In response, the Examiner has conveyed: Batey teaches . . . ." It is clear, however, that Batey et al. does not teach or suggest depositing an antireflective layer to a thickness which is an odd multiple, greater than one, of a wavelength of light to be used in a subsequent process operation on the antireflective layer, as recited in claim 57.

7.   On pages 11-12 regarding the rejection of claims 58 and 59, the Examiner states: "In response, the Examiner has asserted in the Final Action page 9 that Felts '199 teaches equivalent means . . . for delivering process gases . . . . into the process chamber." Nonetheless, "[c]laims 58 and 59 are patentable for at least the same reasons that claim 57 is patentable." "Collins et al. [] does not cure the deficiencies of the other references." See page 16, lines 12-15 of Appellant's Brief.

8.   On pages 12-16 regarding the rejection of claims 60, 61, and 62, the Examiner reiterated the assertions regarding the alleged teachings of Batey et al. and Lee. As discussed in Argument 1 above, however, **it is amply clear that the Examiner's rejection is based on a misinterpretation of the claimed invention, a misconstruction of the cited art, and erroneous mathematics.**

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CONCLUSION:

In view of the foregoing, Applicants respectfully submit that the claims are in condition for allowance, and respectfully request that the rejection of these claims be reversed.

Respectfully submitted,

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TRANSMITTAL FORM

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First Named Inventor	Cheung, David
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ENCLOSURES *(Check all that apply)*

- [ ] Fee Transmittal Form
  - [ ] Fee Attached
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  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
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- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53

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- [ ] Petition to Convert to a Provisional Application
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Date	September 2, 2004

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